Planning, Conducting, and Documenting Data Analysis for Program Improvement

March 2015

DaSy
The Center for IDEA Early Childhood Data Systems

ECTA Center

The contents of this document were developed under a grant from the U.S. Department of Education, # H373Z120002, and a cooperative agreement, #H326P120002, from the Office of Special Education Programs, U.S. Department of Education. However, those contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the Federal Government. DaSy Center Project Officers, Meredith Miceli and Richelle Davis and ECTA Center Project Officer, Julia Martin Eile.

March 2015

Suggested citation:

The Center for IDEA Early Childhood Data Systems, & The Early Childhood Technical Assistance Center. (2015). *Planning, conducting, and documenting data analysis for program improvement*. Menlo Park, CA: SRI International.

Acknowledgments

This document was developed as part of the activities of the DaSy State Systemic Improvement Plan (SSIP) workgroup through collaboration with the Early Childhood Technical Assistance Center (ECTA).

Abby Winer, DaSy/ECTA
Cornelia Taylor, DaSy/ECTA
Taletha Derrington, DaSy
Anne Lucas, DaSy/ECTA

Special thanks is extended to a number of colleagues who reviewed and contributed to the development of this resource:

Kathleen Hebbeler, DaSy/ECTA
Sarika S. Gupta, DaSy
Robin Nelson, DaSy/IDC
Sharon Walsh, DaSy/ECTA
Robert A. Ruggiero, DaSy/IDC

TA&D
NETWORK

Contents

Introduction

This document was developed to help technical assistance (TA) providers and state staff in planning, conducting, and documenting data analysis for program improvement. The intended audiences include state staff and national, state, and local TA providers who are involved in the data analysis for program improvement, using the State Systemic Improvement Plan (SSIP) as an example.

This tool is designed to help states:

- Define and limit the scope of data analysis for program improvement efforts, including the SSIP.
  - Some states have many options for data analysis. The development of a plan for data analysis will help identify and limit the analyses to those most relevant to the critical questions in the state related to child and/or family results, and to identify data quality issues with those data.
- Develop a plan for data analysis.
  - A plan for data analysis is a roadmap for generating data tables and relating the state's findings to the development of improvement plans, including the SSIP.
- Document alternative hypotheses and additional analyses as they are generated.
  - States might identify a need for additional analyses as they examine the first set of findings. When this happens, they will need to add them to the analysis plan and document the additional findings. With documentation in hand, it will be much easier to describe the data analysis process and results to others.
- Summarize the findings and document the results and location of the output from completed analyses.

The Data Analysis for Program Improvement Proceeds through Several Stages

1. **Plan and conduct broad data analysis.** In the broad data analysis stage, states can review their existing aggregated data across a number of potential child or family outcomes, for the SSIP known as State-Identified Measureable Results (SIMRs). The findings from the broad data analysis can be considered along with what was learned from the infrastructure analysis to determine what result or cluster of results would be most justifiable as the focus for program improvement. More information about the broad data analysis and discussion prompts can be found at http://ectacenter.org/eco/assets/docs/SSIP_child_outcomes_broad_data_analysis_template_FINAL.docx
2. **Plan and conduct in-depth data analysis.** After completing the broad data analysis and considering the potential impact and feasibility of potential child or family outcomes (e.g., SIMRs), the state can plan additional in-depth analyses to limit the breadth of their program improvement data analysis efforts and intensify the detail of results. Developing a plan for data analysis is beneficial for structuring and guiding all levels of data analysis. Developing a plan for drilling down into the relevant findings from the broad data analysis *before* starting in-depth data analysis and disaggregating the data will further ensure the state's efforts are focused and result in the information needed to develop a high-quality program improvement plan (e.g., SSIP). See below for a list of discussion prompts to help think through questions and priorities related to the in-depth analysis, including gathering information on root causes or root cause analysis. These questions need not be asked in this order, nor are they all always required or relevant for everyone.

Discussion prompts for in-depth analysis

Based on the broad analysis, what child or family outcome(s) is the state considering for in-depth analysis? Focus the questions below on this outcome(s).

- Does the state have concerns about data quality that may limit the state's ability to interpret the data?
- What factors might be related to performance on the child or family outcome(s)? Consider characteristics of the:
  a. Child
  b. Family
  c. Provider
  d. Program
- Were there changes over time in the characteristics and factors above that might be related to state performance on the child or family outcome over time (e.g., an increase in the percentage of families that speak only Spanish participating in early intervention)?
- Is any information already known about the factors identified above?
- Would looking at additional information about these factors help to identify one or more **root causes** that could be addressed within the time frame of the program improvement plan (e.g., SSIP)?
- What are the state's hypotheses about what is driving differences in the child and/or family outcomes across various dimensions, including characteristics of the child, family, or program?
  a. What data are available in the state data system to answer questions about any of these hypothesized relationships?

Root cause analysis is a type of more in depth analysis that is conducted to identify contributing factors that help answer the question of why low performance is occurring. The objective is to determine what is happening, why it is happening, and what can be done to reduce the likelihood that it will continue. These contributing factors explain the problem and suggest how it can be addressed.

- Root cause analysis may identify one or more contributing factors, which may be interrelated.
- The analysis should identify something that the state can influence and control, that is, a factor that is actionable.
- The analysis might identify something that the state cannot influence or control but should be aware of to increase the chances of success in addressing root causes that are actionable.

3. **Summarize Findings.** After conducting the planned analyses, the state should summarize the findings to share with stakeholders and other audiences. The summary should include:
   - The questions and problem statements addressed
   - Hypotheses about questions and problem statements
   - Analyses completed and results that address the questions and problem statements
   - Possible root causes that are suggested by analyses

Here is a list of discussion prompts to think about in summarizing the findings. These questions need not be asked in this order, nor are they all always required or relevant for everyone.

Discussion prompts for summarizing findings

- What was learned from the data analyses about each of the state's questions?
- Which questions could or could not be answered?
- Were the findings unexpected? If so, what alternative hypotheses were suggested to explain them?
- Could poor data quality have contributed to unexpected findings?
- Where can the state get more information to answer initial questions or ask additional questions that might help in identifying a child or family outcome or measureable result of the program improvement efforts (e.g., SIMR)?

Essential Elements of a Data Analysis Plan and Documentation

A data analysis plan provides descriptive information about the analyses a state is planning to conduct. The following elements should be included in the plan, keeping in mind the order may vary and should be tailored to fit proposed questions and resources.

- Purpose of the intended analyses, including examination of
  - Data quality
  - Overall outcomes (aggregated data or broad data analysis)
  - Specific factors hypothesized to relate to outcomes (disaggregated data or in-depth analysis)
- Description of the general topic of analysis
- Details for planning and conducting the analysis that specify
  - What – the specific topic that is being analyzed
  - Why – the hypotheses or rationales driving the analyses
  - How – the specific variables that will be used, the types of analyses to be conducted (e.g., descriptive percentages and numbers, meaningful difference comparisons, chi squared comparisons), and the order in which the analyses will be completed
- Documentation of decisions and results of the analysis

For additional ideas, see http://ectacenter.org/eco/assets/pdfs/AnalyzingChildOutcomesData-GuidanceTable.pdf

Three examples below should assist states in planning, conducting, and documenting their data analysis findings and analytic decisions. Each example presents a different format, demonstrating that there are multiple ways to document and to capture the key findings of a planned analysis.

Examples of Different Ways to Plan and Document Data Analyses

There are several ways to plan and document the data analysis, but in all cases, the goal is to structure analytic activities to create an efficient, organized process for planning, analyzing, and documenting the data to facilitate writing the SSIP. This section presents three examples of documentation of data analysis, each specifying what was planned, what was analyzed, and what was found. The table below summarizes some of the key differences between the examples to help guide which example may serve as the best model for you.

Features	Example 1	Example 2	Example 3
Format	Outline	Table	Outline
Highlights data quality concerns	x		
Includes broad data analysis (aggregated data)		x	
Includes more in-depth data analysis (disaggregated data)	x	x	x
Includes additional or follow-up analyses to be conducted		x	x
Includes plans for additional data collection	x		

Example 1 presents an approach for planning and documenting data analysis. It is written in outline form and includes the purpose of the analysis; a description of the broad topic of analysis; the general rationale behind the analysis; details for the ***in-depth*** analyses that include what (variables), why (hypothesized), and how (compare percentages) the analyses will be conducted; and the plan for documenting findings and decisions. In addition, it includes a section that articulates the benefits and challenges of a new planned ***data collection to gather information on root causes***, including the estimated effort required. It also discusses ***data quality*** considerations and activities to address them.

Example 2 is a template that incorporates steps and information involved in planning and documenting the data analyses. It is a working document that is organized into two sections, one for the ***broad*** data analyses and one for the ***in-depth*** data analyses. Each section includes (1) the purpose of the analysis; a description of the topic of analysis; (2) the rationale behind the analysis; details on the on additional analyses and specific factors (e.g., child outcomes, positive social relationships, data quality, child/provider/program characteristics); (3) why these factors will be analyzed (hypotheses about relationships and drivers of differences); (4) how the analyses will be conducted (compare percentages); and (5) ***documentation*** of the analyses, results and interpretation. This example presents a template to model analysis planning, including steps to develop hypotheses, describe the analysis, record results, organize files, and track status.

Example 3 provides a template for ***in-depth*** data analysis. It is written in outline form and includes the purpose of the analysis, the question to be answered or addressed by the analysis, and the subgroups and factors to be examined. For each subgroup, the following information is documented: (1) data and comparison to be made, (2) hypothesis or expectation, (3) ***documentation*** of the result of the analysis, and (4) when indicated, ***additional analyses*** to be conducted based on the findings from the initial analyses (including data and comparison(s) to be made, hypotheses/expectations, and results).

These three examples illustrate different ways to go about planning, conducting, and documenting data analyses that lead to the same end – writing the a program improvement plan (e.g., SSIP Phase I plan). Analyses documented in this initial stage may also be used to inform the development and evaluation of program improvement activities (e.g., SSIP Phase II and III).

Example 1 – Planning Data Analyses and Additional Data Collection

Area of focus: Improving capacity of families and providers to support infants' social emotional development

I. Child Outcome – Positive Social Emotional Skills

II. Rationale – Fifty-five percent of children who are younger than age 1 when they enter early intervention (EI) and are identified as having positive social emotional skills that are at or above age expectations. At exit, 10% of these children are found to be below age expectations in positive social emotional skills.

III. Additional drill down analyses that can be completed with the information currently in the Data Management System
   a. Examine the percentages of children who make greater than expected gains in positive social emotional skills by
      i. Size of program – hypothesis: More children will make greater than expected gains in smaller programs than in larger programs.
      ii. Length of time in program AND age at entry – hypothesis: Children who enter the program younger than age 1 and stay in the program for 6 months to 1 year will be less likely to make greater than expected gains than those who enter the program younger than age 1 and stay in the program longer than 1 year.
   b. Examine the percentage of children who enter at age expectations in positive social emotional skills (Child Outcome Summary (COS) rating 6 + COS rating 7/total with a rating) by:
      i. Disability AND age at entry – hypothesis: Children with disabilities with lower levels of impairment (e.g., low birth weight) are expected to be more likely to enter the program functioning at age expectations than those with higher levels of impairment.

IV. Additional collection of information not currently in the Data Management System needed to analyze root causes
   a. Question additional data will be used to examine: How well has each program supported the family's ability to support their child's social emotional development?
      i. Questions to drive data collection on potential root causes:
         1. What practices are providers using to assess social emotional skills?
         2. What strategies are providers using to improve social emotional skills?
         3. What do families perceive or experience in the program related to supporting their child's social emotional development?
         4. What strategies do families report as most helpful in supporting their child's social emotional skills?
      ii. Data collection method – Collect data through interview or survey of a small sample of providers and families.
      iii. Benefits of data collection – Collecting information not yet known about:
         1. The practices that providers use to help families in supporting their child's social emotional skill
         2. Family perceptions of provider-implemented strategies to support their child's social-emotional skills
      iv. Challenges of data collection:
         1. Developing an interview protocol that would be useful in capturing the above information.
         2. Collecting the data would add an additional burden to state staff responsible for ensuring that the data are collected.

3. The interviews may also add an additional burden on families.

v. Estimated effort required –

1. Develop interview protocol – this would require putting together a team that includes families and at least one topical expert. The draft interview protocol would need to be piloted and revised.
2. Administer interview – Staff may need to be assigned to conduct the interviews and enter the responses into a database. The database would need to be developed.
3. Analyze interview responses – At least one staff member will need to read through all of the interviews to identify themes. Data will need to be cleaned and prepared for analysis, then placed into tables that state and program staff can easily review.

b. Review the frequency and quality of social emotional outcomes in the IFSPs.

i. Questions that may be answered by this data collection –

1. What percentage of children served have social emotional outcomes included on the IFSP?
2. Are teams writing high-quality social emotional outcomes?

ii. Data collection method – record review of a sample of IFSPs pulled from the Data Management System.

iii. Benefits of data collection –

1. Will provide information on the frequency and quality of IFSP outcomes around social emotional development.
2. If social emotional outcomes on the IFSP are not high quality, it might point to an area for improving practice.

iv. Challenges of the data collection –

1. State staff time will be required to complete the task.

v. Estimated effort required –

1. Develop a record review protocol. Depending on available resources this might be a simple adaptation of another tool or could be more time intensive if the tool is developed from scratch.
2. Use of staff resources to sample and pull the IFSPs for review.
3. Use of staff time to complete the record review protocol for the selected records.
4. Use of staff time to summarize and table the results of the review.

V. Data quality considerations and potential solutions

a. The data currently collected on child disability are not complete, have not been updated as the child moved through the program, and are inconsistently coded across regions. One activity in place to improve the quality of these data is sharing the reports of child outcomes by disability with the local programs.

b. Some of the assessments used to estimate children's social emotional functioning are not sensitive to delays in this area, particularly in very young children. The state is working with programs to identify and recommend assessments that are more appropriate.

VI. Documentation of the analyses

a. Results of the analyses will be documented in separate files, with filenames inserted at the end of each hypothesis/question in this document.

b. Decisions made to change the planned data analysis will be documented in the plan, including the date the change was made and the rationale behind it.

Example 2 – Data Analysis Plan and Documentation in Table Format

I. Broad data analysis of child outcomes (positive social skills and relationships; knowledge and skills; actions to meet needs)

a. Purpose: used in conjunction with the infrastructure analysis to determine what result or cluster of results would be most justifiable as the focus of the State Systemic Improvement Plan (SSIP).

b. Objectives:

i. Determine whether state results differ compared to national results for summary statement 1 (SS1) and summary statement 2 (SS2).

ii. Determine whether there are upward or downward trends in SS1 and SS2 for the state over the years for which data are available.

iii. Determine whether children exhibit poorer performance on one of the outcomes as compared to the others on SS1 and SS2.

iv. Note: If one of the child outcomes in the state differs from national results more than the others, shows a more notable downward trend, and/or indicates poorer performance, that outcome could be a candidate for the State-Identified Measurable Result (SIMR).

c. Analysis planning and documentation

Analysis Description	Results/Notes (include filenames)	Status
1. Compare state to national percentages on SS1 & SS2 for child outcomes (1 = social emotional, 2 = knowledge & skills, 3 = actions to meet needs)	See [filename of data document/graphs/etc.]. FFY13/SFY14 Data indicate that the state is below the nation on all 3 outcomes for both SS1 & SS2. Percentage point differences are as follows: SS1 SS2 OC1-SE: -8 -11 OC2-KS: -5 -7 OC3-AN: -4 -8	Completed
2. Compare state to national percentages for SS1 & SS2 broken down by moderate and narrow eligibility categories (i.e., ITCA eligibility categories; the state is closest to B-moderate & C-narrow)	See [filename of data document/graphs/etc.]. Category B: FFY11/SFY12 data indicate the state is below ITCA eligibility category B states for SS1 OC1-SE, and higher for the other 2 outcomes. For SS2, the state is below ITCA eligibility category B states on all 3 outcomes. Percentage point differences are as follows: SS1 SS2 OC1-SE: -3 -9 OC2-KS: +2 -6 OC3-AN: +3 -6 Category C: FFY11/SFY12 data indicate the state is below ITCA eligibility category C states for SS1 OC1-SE, and higher for the other 2 outcomes. For SS2, the state is below ITCA eligibility category C states on all 3 areas. Percentage point differences are as follows:	Completed

Analysis Description	Results/Notes (include filenames)	Status
	SS1 SS2 OC1-SE: -1 -6 OC2-KS: +3 -3 OC3-AN: +4 -5	
3. Examine state trends from FFY08-FFY12 in SS1 and SS2 for all 3 outcomes	See [filename of data document/graphs/etc.]. For SS1, OC1 is below the other 2 outcomes for all 5 years, with FFY12 being slightly lower than FFY08. The only significant yearly difference was a drop from FY10-FY11 on OC2, and the overall difference from FY08-FY12 was significantly lower for OC2. In the last 2 years, OC1 increased by 4 percentage points, while OC2 increased by 3, and OC3 decreased by 4. For SS2, OC1 is above the other 2 outcomes for all 5 years, and all 3 outcomes were lower in FFY12 than in FFY08. The only significant yearly difference was a drop from FY10-FY11 on OC2, and the overall difference from FY08-FY12 was significantly lower for OC2. In the last 2 years, OC1 has increased by 5 percentage points, OC2 has remained steady, and OC3 has decreased by 2 percentage points. Qualitative information from providers suggests that SS2 might be inflated due to provider reluctance to give lower ratings if parents do not share the provider's concern in that area.	Completed
4. Determine whether differences between years, across the entire FFY09-FFY12 period, and over the last 2 years were statistically meaningful at the p <.10 level.	Used the meaningful differences calculator, results stored in [filename of data document/graphs/etc.]. Note that the N for SS1 should be smaller than the N for SS2 given that the denominator for SS1 only includes OSEP progress categories a, b, c, & d, while the denominator for SS2 also includes category e.	Completed

d. Interpretation of data and SIMR decision
   i. [include description about the ongoing statewide initiative focusing on social emotional development here]
   ii. [add in key points from above here]
   iii. State selected OC1, positive social relationships, as the broad focus of the SIMR.

II. In-depth data analysis of positive social relationships

a. Purpose: identify characteristics or subgroups that demonstrate better or poorer performance on OC1 that may suggest ways to refine the SIMR, root causes for poor performance, and/or ideas for improvement strategies.

b. Rationale: narrow the universe of child, provider, and program factors/characteristics to be analyzed to those that establish a more focused SIMR and/or suggest root causes and/or improvement strategies.

c. Analyses planning:
   i. Ask questions

1. Are there concerns about data quality that limit our ability to interpret the data?
2. What characteristics and other factors might be related to performance on the child outcome?
   a. Child
   b. Family
   c. Provider
   d. Program
3. What trends in the characteristics/factors above might be related to state performance on the child outcome?
4. Is any information already known about the relationships between these characteristics/factors and child outcomes, or trends in characteristics/factors that could influence state performance?
5. Would additional information about these factors possibly identify one or more root causes that could be addressed within the time frame of the SSIP?
6. What are the state's hypotheses about what is driving differences in the child outcome across child, family, or program characteristics?
7. What data are available in the state data system to answer questions about any of these hypothesized relationships?

ii. Develop hypotheses

Issue	Brainstorm	Trends	What is already known?	Data available or additional info needed?	Hypothesized relation to SE outcomes?	Hypothesized drivers of differences?
Data quality	• Implementation of COS process • Rating done by single rater or team? Who are the raters?	No data	No method for ongoing refreshers/new staff. Anecdotally, SE (OC1) is the area people are least comfortable rating; "self-doubt" in having knowledge and experience to rate this area and discuss with families (recognizing family cues; questions to ask).	• Need to collect data on COS implementation and training – program survey? • Inter-rater reliability tools from Part C in [STATE NAME]	Data quality varies across programs; depends on tools used and provider background and expertise in rating that particular area.	Uneven data quality may drive differences between subgroups of children.

Issue	Brainstorm	Trends	What is already known?	Data available or additional info needed?	Hypothesized relation to SE outcomes?	Hypothesized drivers of differences?
Characteristics/ factors	• Child – CAPTA vs non-CAPTA – Level/frequency of services (# of home visits) – IFSP service types – Rural/urban – Age – Gender – Reason for eligibility – Reason for referral – Length of time enrolled – Who child lives with • Provider – Service provider discipline – Training in SE development • Program – Training on COS process – Assessment tools – Region – % of CAPTA kids in region					

iii. From the hypotheses generated regarding the issues above, select those that 1) we think are most likely to be true and/or yield actionable findings; 2) we have or can get the data needed to answer the questions; and 3) are most likely to identify one or more root causes that could be addressed within the time frame of the SSIP.

III. Analyses planning and documentation

Analysis Description	Results/Notes (include filenames)	Status
1. Data quality: a. Completeness b. Compare the "out of range values" of data for OC1 to OC2 & OC3 (i.e., >10% in	a. There is no variation in completeness of data across the 3 outcomes in all 5 years of available data. b. See [filename of data document/graphs/etc., OSEP Categories worksheet]. Graph of OSEP categories indicates no out of range data, but category e for SE is 36%, compared to 15% for action to meet needs and 10% for	a. Complete b. Complete – consider for qualitative data collection c. Consider which analyses to conduct

Analysis Description	Results/Notes (include filenames)	Status
category a; >65% in OSEP category e) c. Look at ratings of children below age 1 compared to older children (completeness, out of range values, and category distributions)	knowledge and skills. This doesn't reflect the anecdotal information that people have the most concerns about children in this area and don't feel as well-prepared to address this area. Might be something to include in further data gathering (program survey and/or conversations). c. Other states have shared that this is a struggle (accurately rating children < age 1 in the SE area; see [STATE NAME] power point for potential analyses).	
2. Look at SS1 & SS2 stratified by a. Program b. Region c. Program factors	d. Program comparison to state: see [filename of data document/graphs/etc., Program Level SS1 & SS2 worksheet]. For OC1, 15 of the 43 programs are too small (N < 10) for comparison to the state on SS1, and 14 are too small for SS2. For programs with N>10, 9 programs differed significantly from the state on SS1 (4 lower, 5 higher), and 12 programs differed significantly from the state on SS2 (5 lower, 7 higher). Six of the programs differed significantly from the state on both SS1 and SS2 (all higher). e. Region:	In process
3. Look at OSEP Progress Categories stratified by (e.g., child, family, provider factors):		

Example 3 – In-Depth Data Analysis Plan and Documentation

Purpose: To inform the selection and refinement of the state identified measureable result (SIMR) and the root cause analysis.

Objectives: Conduct in-depth data analysis of potential SIMR, taking action to meet needs. Describe the analyses to be conducted by subgroups and characteristics.

I. Question: What contributes to low performance in actions to meet needs?
   a. Race/ethnicity
      i. Proposed analyses: (1) Examine the number of children who exited with a score of 6 or 7 on action to meet needs by child race/ethnicity (White, Black, Asian, Latino, Other) and (2) calculate the percentages of children whose action to meet needs scores increased or decreased between entry and exit by child race/ethnicity.
      ii. Hypothesis: Do not necessarily have clear expectations about race/ethnicity but would like to document differences or disparities.
      iii. Documentation of results: A few meaningful differences were found by child race. Specifically, fewer Latino children than White children exited with a score of 6 or 7 and showed greater than expected growth in actions to meet needs.
   b. Child Gender
      i. Proposed analyses: (1) Examine the number of children who exited with a score of 6 or 7 on action to meet needs by child gender (male/female) and (2) calculate the percentages of children whose scores increased or decreased between entry and exit by child gender.
      ii. Hypothesis: There are no gender differences for action to meet needs.
         1. Note: If there are differences by gender, follow-up analysis would be to look at a proxy for eligibility criteria to see if males are being identified and served for different eligibility criteria (e.g., are the differences due to gender or an associated variable?).
      iii. **Documentation of results:** Hypothesis was not supported. Specifically, more females were rated as exiting with a score of 6 or 7 and showed greater than expected progress in action to meet needs than males.
   c. Age at entry
      i. Proposed analyses: (1) Examine the number of children who exited with a score of 6 or 7 on action to meet needs by age at entry categories, and (2) examine whether scores increased or decreased between entry and exit by age at entry.
         1. Age groupings: Use the following age groupings (in months): 0-3 (very early); 3-6, 6-12, 12-8, 18-24, and 24 or later.
      ii. Hypothesis: Children in services longer are often those with a more severe disability or delay, are less likely to exit at age expectations, and have lower outcomes ratings. Regarding the population of children who were less involved, the hypothesis is that if they are served earlier, they will have more positive outcomes. Need to be able to disentangle severity from age at entry to test the relationship between length of service and outcome.
      iii. **Results:** Expectations were partially supported. Some meaningful differences were found for children who entered services very early (at 0-3 months) compared to those who entered later (12-18, 18-24, and 24months or later).

d. Age at exit
    i. Proposed analyses: Compare the percentage of children with exit ratings of 6 or 7 and who exit at 30-36 months with the percentage of children who exit with the ratings of 6 or 7 and exit at younger ages.
    ii. Hypothesis: Children with more severe disabilities will exit near 36 months and fewer will have with ratings of 6 or 7, while children with less severe disabilities or delays will exit prior to 36 months and more will have ratings of 6 or 7 in actions to meet needs.
    iii. **Documentation of results:** Hypotheses were generally supported. Children who were 36 months at exit were less likely to exit with a score of 6 or 7 compared with children who exited at younger ages.
e. Socioeconomic Status (SES)
    i. Proposed analyses: Compare children who receive Medicaid with children who do not receive Medicaid as a proxy for SES.
    ii. Hypothesis: Children who receive Medicaid will have lower SES and experience more environmental risk factors than those who do not receive Medicaid. Children who receive Medicaid may achieve lower outcomes.
    iii. Documentation of results: TBD

II. For full documentation see [file name for file containing the analysis]